

**ABSTRACT OF THE DISCLOSURE**

An optical stitch regulator system for efficiently regulating the stitch length and stitch frequency of a sewing machine. The optical stitch regulator system includes at least one optical sensor within or external of the sewing platform of a sewing machine for sensing the motion of the fabric being sewn. The motion data is communicated to a control unit which communicates with the sewing machine for controlling the stitch length and frequency.